

*Final Report*

*For Department of Drinking Water Supply,  
Ministry of Rural Development, Government of India*

**Random Sample Survey of Habitations (RSSH) -2006 in J&K State**



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*Survey & Report Writing by  
NATURAL RESOURCES INDIA FOUNDATION (NRIF),  
NEW DELHI*

**RANDOM SAMPLE SURVEY IN J&K**

**STATE HABITATIONS - 2006**

# Random Sample Survey of Habitation (RSSH)-2006

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## Preface

Consequent to the receipt of the clarification from Ministry of Rural Development (Monitoring Division), Govt. of India vide letter dated 5<sup>th</sup> December 2007, (No. Q.17017 / 11/ 2006 A.I (RD)), we initiated the process of finalizing the **Random Sample Survey of Habitations (RSSH)-2006 Report**, for Jammu & Kashmir State, as per the prescribed format of the *Department of Drinking Water Supply, Ministry of Rural Development, Government of India*.

The scope of this Random Sample Survey of Habitations Report-2006 provides the analysis of data collected from two (2) divisions (Kashmir & Jammu), fourteen (14) districts, thirty (30) blocks and six hundred & eighty five (685<sup>1</sup>) habitations, which included (330 NC i.e. Not Covered habitations and 355 PC i.e. Partially Covered habitations) at the time of initiating the survey. This survey used the statistical data of the Rural Habitations Survey-2003, as the bench-mark data and now ascertains the exact status of the rural habitations, with regard to the availability and quality of drinking water in the selected 685 habitations, as at the end of 2006.

### Status of Habitations in 2006 as per Present Survey (At a glance), as per

Category	FC	PC	NC	Total
Distance Norms	216	220	249	685
%age	31.53	32.12	36.35	100
Quality Norms	226	221	248	685
%age	34	31	36	685
Quantity Norms	232	218	235	685
%age	34	32	34	100

The NRIF is grateful to the Ministry for its kind patronage. We also thank the officials of the State Govt. (Departments of Rural Development & PHE, I & FC, other Line Departments) and Zilla Parishad, in extending all the cooperation for smoothly conducting the field verification in all the 14 Districts of the State. The Study Team is highly indebted to the respondents for voluntarily providing the authentic feed back at the grassroots level, which forms the basis of this Report.

Last but not the least, NRIF appreciates the cooperation and guidance provided by the *Development & Research Services Pvt. Ltd. (DRS)*, New Delhi, in the form of providing the Research Tools for data collection, generating of output tables and in report writing.

For **NATURAL RESOURCES INDIA FOUNDATION (NRIF)**

Date: 12<sup>th</sup> December '07  
New Delhi

R P MATTOO,  
P R E S I D E N T

<sup>1</sup> The list of **District-wise, Block-wise, Name of Panchayats, Villages, and Habitations** has been given in the **Appendix-II** for ready reference. And, **Research Tools** are enclosed to the Report at **Appendix-II**.

# *EXECUTIVE SUMMARY*



## *Executive Summary*

### **Introduction**

*For effective implementation of Rural Water Supply Programme, availability of basic information is an essential prerequisite. Likewise, to verify the result of the Rural Habitation Survey (RSS)-2003 and to ascertain the exact position of the status of these rural habitations with regard to availability and quality of drinking water, the Ministry of Rural Development proposed to conduct a Random Sample Survey of Habitations (RSSH) in 2006 in above 16780 rural habitations of 26 states. This report relates to the State of Jammu & Kashmir.*

### **Objectives of the survey**

*The objectives of the random sample survey were to ascertain:*

- Whether the categorization of habitations into Not Covered (NC) / Partially Covered (PC) are correct as per the habitation survey 2003;*
- The position of NC/ PC as on date;*
- The reasons for slippage from FC to PC, PC to NC or FC to NC;*
- The type of water quality problem, if any ;*
- Whether new habitations have emerged since the last survey; and*
- The sources of drinking water supply, management and maintenance system that exists in the surveyed habitations*

### **Scope and Coverage**

*The scope of this report is to analyze the data collected from 14 Districts, 30 Blocks, and 685 Habitations, of the state of Jammu & Kashmir.*

### **Methodology**

#### **(a) Sample size & Sampling design**

*In order to have an estimate about the number of NC and PC habitations in the state block-wise sample size was calculated. While calculating the sample size, it was*

considered that it should be large enough to provide state level estimates for the number of NC and PC habitations.

The sampling design proposed for the study was a two-stage-stratified-cluster sampling procedure was adopted for selection of blocks and habitations. Thirty blocks were selected from the state to select the NC and PC habitations in each block total sample size of NC and PC habitations of the state was distributed proportionately in each block finally habitations were selected from four stratum i.e. quality affected NC and PC and quality unaffected NC and PC habitations by using Probability Proportion to Size (PPS). Systematic Random Sampling procedure was adopted to select the households.

**(b) Research Tools** Three type of questionnaires / schedules were designed: viz. Habitation Questionnaire, Household Questionnaire and, Water Supply Department Schedule.

- Habitation Questionnaire captured the various information related to quantity, quality and distance of water supply sources from the habitations and also social and demographic characteristic of the habitation.
- Household Questionnaire was designed to get information about the consumption pattern of the household, required and available quantity of water, quality of water as perceived by the household member, adequacy of water during different seasons, distance of water supply sources from household and their perception about the availability of water for drinking, bathing, washing clothes / utensils sanitation and other household chores.
- Water Supply Department Schedule was designed to collect the information about the status of habitations as per CAP-199, Habitations Survey-2003 and status as on date. The schedule also captured the reasons for slippage and water quality problems (Research Tools may be seen at Appendix-I).

### **Profile of Surveyed Habitations**

Out of the total of 685 sampled habitations, 514 (75.00%) habitations were main and remaining 171 (25.00%) were other habitations of the census / revenue villages.

*During 2003 survey period, the total number of habitations in the census / revenue villages was 5100. This has increased to 5293 in the year 2006. Thus, the number of rural habitations, during a period of three years, has increased by about 3.8 percent.*

*There are 151,595 households in the covered habitations and nearly 18 percent of the household belong to Scheduled Castes, another 14 percent are of Scheduled Tribes and the remaining about 68 percent fall in "Other" category of social groups.*

*About 39 percent of the total households are from BPL category and the rest (61 %) belong to APL category*

### **Demographic Profile of Respondents**

***Respondents of household schedules:*** 6841 persons have been interviewed from 685 sample habitations. About 54 Percent of the respondents are males and remaining 46 Percent are females.

*The respondents have been selected from every social group of the society. About 47 percent belong to OBC another 27 percent come of Scheduled Castes and 11 percent from Scheduled Tribes and the remaining 15 percent from "Other" category of the society.*

**Family size of Surveyed Households:** Family size of the Surveyed households varied between 5 and less members and more than 20 members. About 50 percent of the households have 5 and less members, another 31 percent have 6 to 10 members another 13 percent have 11 to 20 members and there are about 6 percent households which have even more than 20 members.

**Water Supply Sources:** Households get water from more than one source. About 47 Percent get it from Hand pumps, 20 percent from dug wells, another 27 percent

from public stand posts (underground water), public stand post (surface water source) meet requirement of 13 percent of the households. Then there are 12 percent households who get water also from springs and about 35 percent from other sources.

(a) Location of water Supply Source: About 84 percent of the households have water sources located within their habitations, another 9 percent have water source within their dwelling units / yards or plots. Only above 6 percent of the households have water sources covered outside their habitations.

(b) Distance of water supply sources from the Household: Majority of the households (65 percent) get water within less than 100 meters of their location. Then there are 56% of the households, besides getting water within less than 100 meters, get water at a distance of 100-400 meters. For about 7 percent of the households water supply sources are at a distance of more than 1000 meters.

**Type of water supply sources:** From the point of view of the health of the people, the water supply sources can be broadly classified in two categories viz. (1) Safe Water Supply sources; and, (2) Unsafe Water Supply Sources. Safe water supply sources may be further classified in: (a) Safe Community water supply source; and, (b) Safe individual water supply sources.

- **Safe water supply sources** consist of: (a) Public stand post (surface water); (b) Public stand post (underground water); (c) protected spring source; and, (d) protected Dug wells. The total number of safe community water supply sources in the sampled habitations has increased from 6781 in 2003 to 9524 in 2006 i.e. an increase of about 40 percent.
- **Safe individual water supply sources** comprise of:(a) individual hand pumps not accessible to public; (b) piped water supply (surface water); and, (c) piped water supply (underground water). The total numbers of safe individual water supply sources have increased from 16,854 in 2003 to 38,793 in 2006 an overall increase by about 130 percent area in their year's period.
- **Unsafe community water supply sources** consist of: (a) unprotected dug wells (b) unprotected spring sources; and (c) others. The number of unsafe community

water supply sources has decreased from 4030 in 2003 to 3735 in 2006 – a decrease of about 7percent .

**Usage of water obtained form different sources**

- (a) **Hand pumps** (Pvt. / Govt.): About 23 percent of the households use hand pumps water for household chores, another 17 percent for drinking, bathing, account for 14 percent. About 31 percent use hand pumps water for all purposes, 23 percent for household chores and 15 percent for cattle.
- (b) **Public Stand post** (Surface water): About 49 percent of the households use public stand post water for drinking, another 25 percent for bathing, 14 percent for household chores, 4 percent for cattle and, 8 percent for all purposes.
- (c) **Public Stand post**\_(underground water): About 36 percent use this water for drinking, another 19 percent for bathing, 17 percent for household chores, 10 percent for cattle and 17 percent for all purposes
- (d) **Spring Sources:** Around 34 percent and 35 percent of the households use spring water for bathing household chores respectively. About 15 percent of the households use this water for drinking, 3 percent for cattle and 12 percent for all purposes.
- (e) **Dug wells:** About 30 percent of the households use the dug-well water for all purposes, 21 percent for household chores, 19 percent for drinking, 18 percent for bathing and, 13 percent for cattle.
- (f) **Other water supply source:** About 28 percent of the households use the water obtained form the sources for household chores, 22 percent for cattle, 21 percent for bathing, 18 percent for all purposes and, 12 percent for drinking.

**Scarcity of water:** Information on the scarcity of water surveyed in habitations during different periods of the year has been obtained form two sources viz. (a) People's perception and experience during one year before the survey; and, (b) Investigator's opinion on scarcity of water during the year.

*As per the perception and experience of the villagers during one year before the survey about 74 percent reported to scarcity of water while nearly 7 percent of the total habitations reported scarcity during whole year, 16 percent reported scarcity of water during summer, another 2 percent each reported scarcity of water during winter and ten months in the year.*

*There are variations in the assessment on scarcity of water between villagers and investigators for instance,*

*As per investigators assessment, there is no scarcity of water in about 43 percent of habitations, while nearly 8 percent of the total habitations have scarcity of water during whole year, 41 percent have scarcity of water during summer, another 2 percent of habitations face scarcity of water during winter and, about 6 percent face the water scarcity during ten months of the year.*

**Management and maintenance System of public Assets:** *Gram Panchayats play an important role in the maintenance of public assets in the state. As a whole about 68 percent of the total habitations public assets are maintained by Gram Panchayat followed by water supply department (22%) community (6%), users group (2%) and others (2%).*

*Around 29 percent of habitations utilize Gram Panchayat fund to maintain public water supply sources, 60 percent collect water charges from users and community and the remaining 11 percent maintain through other sources.*

**Investigator's perception about Maintenance of Hand pumps and PSPs:** *In nearly 51 percent of the surveyed habitations investigators reported the maintenance of Hand pumps as "very good" and 'good' in about 30 percent as 'average'; where as maintenance of PSPs was found to be "very good" and 'good' in nearly 27 percent of habitations and 'average' in about 55 percent of habitations .*

### **People's perception about Available water supply:**

- **Quantity of water:** Nearly 36 percent neither are satisfied, 42 percent within neither satisfied nor dissatisfied and, around 22 percent are not at all satisfied with the quality of water.
- **Quality of water:** Nearly 34 percent of the habitations are satisfied with the quality of available water, around 42 percent are neither satisfied nor dissatisfied and 24 percent are not at all satisfied with the quality of available water.
- **Colour of water:** Are overwhelming majority of the respondents (87 percent) reported water to be colourless, 9 percent found the water reddish and remaining 4 percent reported the colour of the available water as muddy.
- **Taste of water:** About three-fourth of the respondent reported the taste of available water as 'good', 21 percent tasted the water as slightly brackish and remaining 4 percent as brackish.
- **Smell of water:** About three-fourths of the respondents reported water to be odorless, 16 percent found the water slightly pungent and, another about 2 percent reported smell of available water as pungent.
- **Adequacy of water:** About 67 percent of the respondents reported the supply of water as sufficient and for about one-third it is insufficient.
- **Impurities in water:** In the present survey 11.22 percent habitations reported having salinity in water, 8.36 percent fluoride, 0.97 percent arsenic, 0.40 percent iron and 2.58 percent reported having other water quality problem. More or less similar status was observed in the Habitation Survey-2003 also. Nearly one-fourth of the habitations have reported having water quality problem.

**Status of Habitation at the time of Habitation Survey 2003 after Re-assessment of HS-2003:** According to habitation survey 2003, there were 12394 habitations in Jammu & Kashmir of which 2177 (17.56%) were categorized as NC, 4627 (37.33%) were categorized as PC and 5,590 (45.10%) were categorized as FC. After re-assessment of the Habitations Survey 2003, it

*is found that of the total habitations in the State of J&K, 7163 (+5% or 7521 - 6805) were FC, 3412 (+\_5% or 3583 – 3241) were PC and 1820 (+\_ or 1911 – 1729) were NC.*

**Status of Habitations as on Date:** Current Status of habitations in the state of Jammu and Kashmir including already categorized habitations in Habitation Survey 2003

- FC Habitations may lie between 8527 – 7715
- PC Habitations may lie between 3063 – 12771 and
- NC Habitations may lie between 1423 – 1287

**Slippage of Habitations**

*Slippage of habitations is mainly occurring when the status of habitation slipped down such as FC to PC, PC to NC or FC to NC.*

**Major reasons for Slippage:** *Between Habitation Survey (RSS) 2003 and Present (RSSH) Survey of 2006 is: -*

- *Decrease in water table in about 27 percent of the total habitation in the state;*
- *Increase in population accounts for slippage in about 15 percent of the habitations;*
- *About 9 percent of the habitations have reported slippage done to increase in number of habitation*
- *Permanently defunct water supply source account for slippage in around 5 percent of habitations.*